



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,137	06/05/2001	Naoji Sakamoto	DKT00123	6261

7590 02/05/2004  
Borg Warner Inc.  
Powertrain Technical Center  
3800 Automation Avenue, Ste. 100  
Aubun Hills, MI 48326

EXAMINER

CHARLES, MARCUS

ART UNIT PAPER NUMBER

3682

DATE MAILED: 02/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/874,137

Applicant(s)

SAKAMOTO ET AL.

Examiner

Marcus Charles

Art Unit

3682

My

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-17 is/are allowed.
- 6) ☒ Claim(s) 1,3-7 and 9-13 is/are rejected.
- 7) ☐ Claim(s) 2 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This action is responsive to the Amendment and RCE filed 12-01-2003, which has been entered. Claims 1-6 and 8-17 are currently pending.

1. The request filed on 12-01-2003 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/874,137 is acceptable and a RCE has been established. An action on the RCE follows.

#### ***Allowable Subject Matter***

2. The indicated allowability of claim 6 is withdrawn in view of the newly discovered reference(s) to Kozakura et al. Rejections based on the newly cited reference(s) follow as in paragraph 7.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 11, it is unclear how the link plate contact surface can be smaller than that of the guide plate contact surface when the diameter of pinhole of the link plate is larger than that of the guide plate.

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Ichikawa et al.(5,989,140). Ichikawa et al. discloses a silent chain comprising a plurality links plates (2/3) each having a pair of tooth parts (t), a guide link (2A/7) having a pair of pin holes and disposed on the outermost side of the link plates and fixed to linking pins (4), the contact surface of the link plates is in contact with the chain guide when the chain is in contact on the chain guide surface.

In claim 13, note the teeth (t) of the guide plate.

7. Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Kozakura et al. Kozakura et al. discloses a chain comprising a plurality of link plates each having a pair of tooth parts (t) above and below the pinholes (h), a guide link (7) having a pair of pin holes (H) and disposed on the outermost side of the link plates and fixed to linking pins (4) such that the distance from a centerline of the pin hole of the link plate to the link plate surface is less than the distance from the centerline of the pin hole of the guide link to the surface of the guide link so that the distance is effective to prevent substantial contact between the tooth part of the of the link plate and the contact surface of the chain guide.

In claim 10, it is apparent that shoulder parts of the guide link do not protrude beyond the shoulder of the shoulder parts of the link plate

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 4-5, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mott in view of Kozakura et al.(5,967,926). Mott discloses a silent chain comprising a plurality links plates (12) each having a pair of tooth parts, a guide link (14) having a pair of pin holes and disposed on the outermost side of the link plates and fixed to linking pins (14) such that the distance from a centerline of the pin hole of the link plate to the link plate surface is greater than the distance from the centerline of the pin hole (22) to the surface of the guide plate. Mott does not disclose that the silent chain includes a chain guide and the guide link has a crotch in the surface facing the guide link. Kozakura et al. discloses a silent chain (fig. 5) comprising a chain guide (8) to prevent vibration. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the chain of Mott with a chain guide in view of Kozakura et al. in order to reduce vibration.

Regarding claim 4, Mott does not disclose the link plate has teeth on both sides of the pinhole. Kozakura et al. discloses a silent chain in which the link plates (2/3) have teeth (t) on both sides of the pinhole (h) for engaging an idler sprocket and for driving multiple sprockets in opposite rotating directions. Therefore, it would have been obvious to one of ordinary skill in the art to further modify the link plates of Mott device to include the link plates of Kozakura et al. for engaging an idler sprocket and for driving multiple sprockets in opposite rotating directions.

In claim 5, it is apparent that shoulder parts of the guide link do not

protrude beyond the shoulder of the shoulder parts of the link plate

In claim 11, it is apparent that the link plate contact surface area is smaller than that of the contact surface area of the guide plate because the guide plate has an oval shaped pinhole and the link plate pinhole is round.

Regarding claim 13, Mott does not disclose the guide links and the link plates in contact with a chain guide and the surface of the guide link has a plurality of teeth.

Kozakura et al. further discloses the guide links (3') and link plate (2) contacting the chain guide (6') and the contacting surface of the guide link (3') has teeth in order to prevent the chain from chattering and minimize lateral movement of the chain.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the chain of Mott to include the limitation of Kozakura et al. in order to prevent the chain from chattering and to minimize lateral movement of the chain.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mott in view of Kozakura et al. as applied to claim 1 above, and further in view of JP('4046241). Mott does not disclose that the guide link has a crotch in the surface facing the guide link. JP('4046241) discloses a silent chain comprising a plurality of guide links (3), wherein each guide link has a crotch part facing the chain guide (6) in order to reduce the weight of the chain and increase the flexibility of the chain in the transverse direction. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the guide link of Mott to include a crotch in view JP('4046241) in order to reduce the weight of the chain and increase the flexibility of the chain in the transverse direction.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kozakura et al. in view of JP('4046241). Kozakura et al. in does not disclose that the guide link has a crotch in the surface facing the guide link. JP('4046241) discloses a silent chain comprising a plurality of guide links (3), wherein each guide link has a crotch part facing the chain guide (6) in order to reduce the weight of the chain and increase the flexibility of the chain in the transverse direction. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the guide link of Kozakura et al. in to include a crotch in view JP('4046241) in order to reduce the weight of the chain and increase the flexibility of the chain in the transverse direction.

***Allowable Subject Matter***


12. Claims 14-17 are allowed.

13. Claims 2 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (703) 305-6877. The examiner can normally be reached on Monday -Thursday 7:30 am-600 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci can be reached on (703) 308-3668. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.

  
Marcus Charles  
Primary Examiner  
Art Unit 3682  
January 28, 2004